



# The 766th Explosive Hazards Coordination Cell Leads the Way Into Afghanistan

*By First Lieutenant Matthew D. Brady*

**O**n today's resource-constrained, high-turnover, asymmetric battlefield, assessing the threats and developing appropriate courses of action can present leaders with complex choices requiring analysis of second- and third-order effects. In a legacy battlefield like that in Afghanistan, threat analysis can become complicated due to the presence of explosive hazard remnants from decades of conflict. To synchronize the combat power and resources dedicated to reducing those hazards, a common operating picture is needed. The explosive hazards coordination cell (EHCC) helps develop

the common operating picture and provides informational or situational understanding on explosive hazards to coalition forces to minimize coalition and civilian casualties.

## **New Type of Engineer Organization**

**T**he first EHCC to be deployed to Afghanistan in support of Operation Enduring Freedom was the 766th EHCC, Illinois Army National Guard. Its mission was to provide situational awareness on explosive hazards to coalition



**Terrain such as this narrow pass in Afghanistan can limit the mobility of route clearance packages.**

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>APR 2009</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>	
4. TITLE AND SUBTITLE <b>The 766th Explosive Hazards Coordination Cell Leads the Way Into Afghanistan</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>U.S. Army Engineer School,14010 MSCoE Loop BLDG 3201, Suite 2661,Fort Leonard Wood,MO,65473-8702</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>4</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			





**Many roads in Afghanistan are simply cut into the side of a mountain and may not bear the weight of heavy route clearance vehicles.**

forces, the International Security Assistance Force (ISAF), and nongovernmental organizations to support stability operations in Afghanistan. The cell's Soldiers provided trend and pattern analysis, focusing on elements directly involved in the removal or reduction of explosive hazards. In addition, they observed, collected, wrote, published, and distributed route clearance information.

The EHCC is a new type of engineer organization that was first employed during Operation Iraqi Freedom. At its beginning in spring 2003, the EHCC was known as the Mine and Explosive Ordnance Information Coordination Cell (MEOICC). In its early days, it merged portions of a Mine Information Coordination Cell (MICC)—which tracked explosive hazards to coordinate safe military movement in mined areas and supported force protection through hazard awareness training—and a National Mine Action Authority (NMAA), which coordinates Mine Action Center (MAC) operations in regions where humanitarian demining operations are active. Since fall 2005, the organization has been known as the EHCC, and to date there have been four so-named rotations through Iraq. The EHCC in Afghanistan

was first employed in spring 2008. In the past, EHCCs had been formed from elements of engineer battalion headquarters support companies. Doctrinal EHCCs began to be stood up in 2008 and will continue into 2011.

### **766th EHCC Partners**

**T**he 766th EHCC partnered with many organizations during its mission in Afghanistan. As an organic part of Combined Task Force (CTF) Castle, the EHCC supported Task Force (TF) Workhorse (Route Clearance) and TF Hammer (Construction) by providing them with explosive hazards awareness. Along with components of CTF Castle, the EHCC collaborated with the Combined Information Data Network Exchange (CIDNE); BuckEye, an airborne high-resolution geospatial collection system; Joint Task Force (JTF) Paladin, the counter improvised explosive device (C-IED) task force for Afghanistan; the MAC; and the Counter Explosive Hazards Center (CEHC) at the United States Army Engineer School, Fort Leonard Wood, Missouri.



## TF Workhorse

Everything the EHCC produced was primarily focused on supporting TF Workhorse, which had the route clearance mission for Regional Command–East and portions of Regional Command–South. TF Workhorse led the way on route clearance operations all across Regional Command–East and proved to be a dominant player in the IED fight, involved in more than one-third of all IED events in its area. It excelled in adapting quickly to the ever-changing threat presented by the IED fight. Not only did the Soldiers incorporate the new technologies that were constantly offered to them, they came up with innovative ways to push their equipment to the limit—and sometimes beyond the original design concept.

## Combined Information Data Network Exchange

The EHCC collaborated with CIDNE to improve the quality of reporting and helped to educate people on the importance of timely, accurate reporting. CIDNE is the database of record and provides users with the tools to support the diverse and complex processes contributing to the mission of coalition forces. It provides an information bridge between various communities which, while working the same problem sets from different perspectives, might not otherwise be able to share data. The Web-enabled Temporal Analysis System (WebTAS) is a flexible suite of generic analytical tools that allows organizations to quickly fuse, visualize, and interpret disparate sources of information, including databases, data streams, and other structured information. WebTAS is designed to help users uncover trends, patterns, and relationships in their data by providing a number of visualization options. Using WebTAS to mine the CIDNE database, the EHCC was able to obtain real-time data on explosive hazard events throughout the theater. This enabled them to create accurate and up-to-date explosive hazard overlays for analysis at both the tactical and operational levels.

## BuckEye System Imagery

The EHCC worked with the BuckEye System to provide high-resolution geospatial data coupled with explosive hazard activity overlays so that Soldiers at the tactical level could have better situational awareness of explosive hazard activity in their area of operations. In 2006, the BuckEye System was deployed to Afghanistan to conduct intelligence, surveillance, and reconnaissance missions in support of Operation Enduring Freedom. The BuckEye System's digital color camera was combined with sensor data to collect high-resolution, high-accuracy elevation data. The EHCC used ArcGIS,™ a geospatial analysis program, to fuse the imagery and elevation data, pulled from the CIDNE database using WebTAS, to create a tailored operational picture. This was then used to create Portable Document Format (PDF) files that were small enough to be distributed in locations with limited or restricted bandwidth.

## JTF Paladin Liaison Officer

The EHCC embedded a liaison officer with JTF Paladin to facilitate communications among EHCC, CTF Castle, TF Workhorse, Combined Joint Task Force 101, and ISAF soldiers employed in the C-IED fight. The liaison officer brought extensive knowledge of route clearance operations and the ability to navigate through both the CTF Castle and JTF Paladin organizations. This let the liaison officer distribute critical information to U.S. and coalition forces. He established an enhanced working relationship between TF Workhorse, the EHCC, and the JTF Paladin operations research/systems analysis section, science and technology advisors, C-IED Operations Integration Center,

---

---

*“...assessing the threats and developing appropriate courses of action can present leaders with complex choices...”*

---

---

and Asymmetric Warfare Group. He also assisted the United States Army Materiel Command by helping coordinate the distribution of several C-IED technologies and initiatives. The liaison officer was able to engage members of ISAF from Regional Commands–East, –West, –North, –South, and –Capital to educate and inform them on what route clearance equipment is in operation by U.S. forces and how the ISAF can use this equipment to perform route clearance missions in their respective areas of operations. Polish, Italian, German, British, Canadian, and French soldiers were all aided by the liaison officer's knowledge of route clearance equipment and operations.

## Mine Action Center

The EHCC worked with the MAC to coordinate mine-field activity near coalition forces. The MAC for Afghanistan coordinates mine action activities in the country and operates under the auspices of the Relief, Recovery and Reconstruction Pillar of the United Nations Assistance Mission to Afghanistan. It is a program of the United Nations Mine Action Service, implemented by the United Nations Office for Project Services. Members of the EHCC staff were also integrated into the MAC itself. They provided geospatial map-making support to document the location of mine areas all across Afghanistan. They also participated in the supervision and quality assurance of the humanitarian demining efforts throughout the Afghanistan theater of operations.

## Counter Explosive Hazards Center

The CEHC is the primary training source that the EHCCs use to track and analyze explosive hazards. The CEHC mission is to preserve the fighting force by—

- Providing explosive hazard training to deploying forces.
- Helping to identify and field viable countermeasures solutions and technologies.
- Developing the intellectual and situational superiority of combat units.

The Center provides predeployment training to all units assigned the EHCC mission. During its deployment, the 766th EHCC maintained contact with the CEHC and worked with it to continue to refine doctrinal concepts for both route clearance operations and the EHCC itself.

### Mobile Observation Team

The EHCC also employed a mobile observation team (MOT), which conducted ride-along missions with the route clearance packages (RCPs) as specialized observers to collect and document the best practices being used by RCPs and to help distribute those tactics, techniques, and procedures (TTP) across the theater. As the team members moved from one area to another, they brought with them experiences gathered from route clearance missions with other RCPs. This mobility gave them a broader perspective on the C-IED fight than the typical RCP would have. In turn, this allowed the team members to recognize IED threats as they migrated into the areas of operation of different RCPs. As these threats spread across the theater, they could appear to be new techniques when encountered by an RCP for the first time, though the technique could be common in other parts of the theater. When the team members passed through, they helped RCPs counter the new threat by relaying experiences gathered from conducting missions with other units that had encountered the threat before. This allowed RCPs to discover how neighboring units were operating and learn from their collective experiences. Ultimately, this led TF Workhorse to

create a strike after-action review to cross-level TTP after each significant activity.

### Route Clearance Handbook

The MOT spent most of its time learning from TF Workhorse and bringing those route clearance concepts back to the EHCC for greater distribution. The team's mission culminated in the publication of a route clearance handbook, specific to Operation Enduring Freedom, documenting the successes of TF Workhorse and other RCPs operating in-theater. With the help of the Center for Army Lessons Learned, the EHCC will publish this handbook for widest distribution.



*First Lieutenant Brady is scheduled to take command of the 631st Engineer Support Company, 766th Engineer Battalion. Previously an enlisted Soldier, he has served more than 6 years in the Army National Guard. He is a graduate of the Engineer Officer Basic Course and holds a bachelor's in civil engineering and a master's in structural engineering from the University of Illinois at Urbana-Champaign. He also holds a professional engineering license.*

**Note.** The 766th EHCC was formed out of the Headquarters Support Company, 766th Engineer Battalion, Illinois Army National Guard. The EHCC worked closely with the route clearance battalion from TF Workhorse, which was formed from components of the 201st and 206th Engineer Battalions, Kentucky Army National Guard, and the 927th Sapper Company, Louisiana Army National Guard. TF Hammer was formed out of the 62d Engineer Battalion, United States Army, Fort Hood, Texas. The EHCC, TF Workhorse, and TF Hammer operated under the command of the Engineer Brigade, CTF Castle, which was formed out of the Headquarters and Headquarters Company, 420th Engineer Brigade, United States Army Reserve.